If you are using a printed copy of this procedure, and not the on-screen version, then you <u>MUST</u> make sure the dates at the bottom of the printed copy and the on-screen version match.

The on-screen version of the Collider-Accelerator Department Procedure is the Official Version. Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A

C-A OPERATIONS PROCEDURES MANUAL

ATTACHMENT

4.120.72.b LINAC Gate Tests

C-A-OPM Procedures in which this Attachment is used.					
4.120.72					

Hand Processed Changes

HPC No.	Date	<u>e</u>	Page Nos.	<u>Initials</u>	
	Approved:	Sig	nature on File		
		Collider-Acco	elerator Departme	ent Chairman	Date

4.120.72.b LINAC Gate Tests

PASS ANNUAL ACCEPTANCE TEST PROTOCOL

Division A Software Filename and Checksum: Title:	Checksum:
Division B Software Filename and Checksum: Title:	Checksum:
<u>Initial testing complete</u> :	
Test Team Leader's Name (Print):	_ Life Number:
Test Team Leader's Name (Sign):	Date://
Acceptance test procedure complete (following repairs and retesting if required):	
Test Team Leader's Name (Print):	Life Number:
Test Team Leader's Name (Sign):	Date:/
Test results reviewed by:	
Safety Section Head's Name (Print):	Life Number:
Safety Section Head's Name (Sign):	Date://
•	
Test results accepted by Radiation Safety Committee:	
RSC Member's Name (Print):	Life Number:
RSC Member's Name (Sign):	Date:/

2

1.1 CONDUCT Visual check on LINAC doors following Table-1, below

Micro Switch		Switch	Verify		Verify		
Gate	Verify Align OK	Verify Opern OK	Elec Wiring OK	Verify Gate Box OK	Open/Close Fctns OK	Verify all x's Corr.	Inspn OK Init.
AGS/HEBT							
невт							
BLIP							
PLUG							
Plug Door Swing (PDS)							
Tank9							
Tank1							

Legend: Tick = O.K. x = Problem N/A = Not Applicable

Table 1: Summary of Physical Inspection of LINAC Gates

☐ Check for acceptance of Visual check on LINAC gates

1.2 Test of AGS/HEBT (A/H) gate

VERIFY PLACE	Hardware □, Electrical □ at A/H gate is Linac in Restricted Access (RA) at encl 4880 with BNL-3 key and	O.K.
	green P/B	
VERIFY	Linac is in	RA
VERIFY	Attempt to open A/H gate with AA256 key from AGS side	SUCCESSFUL
OPEN	Crash Glass switch	
VERIFY	At encl 4880 relay EK10 is	OFF
VERIFY	A/H Crash light at encl 4880 is	ON
VERIFY	Crash light at A/H gate is	OFF
CLOSE	Crash Glass switch and leave closed	
VERIFY	At encl 4880 relay EK10 is	ON
VERIFY	A/H Crash light at encl 4880 is	OFF
VERIFY	Crash light at A/H gate is	ON
HOLD	Gate MS and Electric Strike (ES)	CLOSED
VERIFY	Gate lamp □ and ES lamp □ are	ON
OPEN	Gate MS	
VERIFY	Gate lamp □ and ES lamp □ are	OFF
CLOSE	Gate MS and hold	CLOSED

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	VERIFY	Gate lamp □ and ES lamp □ are	ON
_	OPEN	ES	ON
	VERIFY	Gate lamp is	ON
	VERIFY	ES lamp is	OFF
	OPEN	A/H gate	
	CLOSE	Gate redundant (GR) microswitch (MS)	
	VERIFY	At encl 4880 relay EK11 is	ON
	VERIFY		
		At encl 4880 A/H N/Closed light is	OFF
_	OPEN	GR MS	OFF
	VERIFY	At encl 4880 relay EK11 is	OFF
	VERIFY	At encl 4880 A/H N/Closed light is	ON
	CLOSE	A/H gate	
	VERIFY	A/H gate is	CLOSED
_	PLACE	Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and	020022
	LITCE	P/B	
	VERIFY	Linac is in	CA
	VERIFY	At A/H gate-box N/Reset light is	ON
	VERIFY	At A/H gate-box Reset light is	OFF
	VERIFY	At encl 4880 relay EK9 is	OFF
	VERIFY	At encl 4880 N/Reset light is	ON
	DECEM	A/II Cara - 21 DNII - 2.1	
	RESET	A/H Gate with BNL-3 key	
	VERIFY	At A/H gate-box N/Reset light is	ON
	VERIFY	At A/H gate-box Reset light is	OFF
	VERIFY	At encl 4880 relay EK9 is	OFF
	VERIFY	At encl 4880 N/Reset light is	ON
	V LIKII I	The other 1000 Type See right is	
	VERIFY	Attempt to open gate with MCR S/R and AA256 key from AGS side	SUCCESSFUL
	VERIFY	At A/H gate-box N/Reset light is	ON
	VERIFY	At A/H gate-box Reset light is	OFF
	VERIFY	At encl 4880 relay EK9 is	OFF
	VERIFY	At encl 4880 N/Reset light is	ON
	CLOSE	A/H gate	011
	Check for	acceptance of Test of AGS/HEBT gate	
1.3 Test	of HEBT gat	re e	
	VERIFY	Hardware □, Electrical □ at HEBT gate is	O.K.
Ц	PLACE	Linac in Restricted Access (RA) at encl 4880 with BNL-3 key and	O.II.
	ILACE	green P/B	
	VERIFY	Linac is in	RA
	VERIF I	Linde is in	KA
	VERIFY	Attempt to open HEBT gate with local P/B	SUCCESSFUL
_			
	OPEN	Crash Glass switch	
	VERIFY	Crash light at HEBT gate	OFF
	CLOSE	Crash Glass switch and leave closed	
	VERIFY	Crash light at HEBT gate is	ON
	HOLD	Gate MS and Electric Strike (ES)	CLOSED
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	VERIFY	Gate lamp □ and ES lamp □ are	ON
	OPEN	Gate MS	
	VERIFY	Gate lamp and ES lamp are Gate MS and hold	OFF CLOSED
	CLOSE VERIFY	Gate lamp and ES lamp are	ON
_	OPEN	ES	
	VERIFY	Gate lamp is	ON
	VERIFY	ES lamp is	OFF
	OPEN	HEBT gate	
	CLOSE	Gate redundant (GR) microswitch (MS)	ON
	VERIFY VERIFY	At encl 4880 relay IK12 is At encl 4880 HEBT N/Closed light is	OFF
ш	OPEN	GR MS	
	VERIFY	At encl 4880 relay IK12 is	OFF
	VERIFY	At encl 4880 HEBT N/Closed light is	ON
	CLOSE	HEBT gate	
	VERIFY	HEBT gate is	CLOSED
	PLACE	Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B	
	VERIFY	Linac is in	CA
			-
	VERIFY	HEBT gate-box Reset light is	OFF
	VERIFY VERIFY	At encl 4880 relays FK1 □ and FK8 □ are At encl 4880 N/Locked light is	OFF ON
ш	V EXII I	At the 4000 I vibothed light is	OIV
	RESET	HEBT Gate with ME-17 key	
	VERIFY	HEBT gate-box Reset light is	ON
	VERIFY	At encl 4880 relay FK1 □ and FK8 □ are	ON
	VERIFY	At encl 4880 N/Locked light is	OFF
	VERIFY	Attempt to open gate with local P/B	SUCCESSFUL
	VERIFY	At HEBT gate-box Reset light is	OFF
	VERIFY	At encl 4880 relay FK1 □ and FK8 □ are	OFF
	VERIFY	At encl 4880 N/Locked light is	ON
	CLOSE	HEBT gate	
	Check for	acceptance of Test of HEBT gate	
Test	of BLIP gate	2	
	VERIFY	Hardware □, Electrical □ at BLIP gate is	O.K.
_	PLACE	Linac in Restricted Access (RA) at encl 4880 with BNL-3 key and	
	TIED IET	green P/B	7 . 4
	VERIFY	Linac is in	RA
	VERIFY	Attempt to open BLIP gate with local P/B	SUCCESSFUL
	OPEN	Crash Glass switch	-
	VERIFY	At encl 4880 relay IK13 is	OFF
	CLOSE VERIFY	Crash Glass switch and leave closed At encl 4880 relay IK13 is	ON
J	·		

1.4

	HOLD	Gate MS and Electric Strike (ES)	CLOSED
	VERIFY	Gate lamp □ and ES lamp □ are	ON
	OPEN	Gate MS	
	VERIFY	Gate lamp □ and ES lamp □ are	OFF
	CLOSE	Gate MS and hold	CLOSED
	VERIFY	Gate lamp □ and ES lamp □ are	ON
	OPEN VERIFY	ES Gate lamp is	ON
	VERIFY	ES lamp is	OFF
	V EIGHT 1	Lo temp to	011
	OPEN	Gate redundant (GR) microswitch	
	VERIFY	At encl 4880 relay IK13 is	OFF
	VERIFY	At encl 4880 BLIP Door Redun. N/Closed light is	ON
	VERIFY	GR light at BLIP gate is	OFF
	CLOSE	GR MS	037
	VERIFY	At encl 4880 relay IK13 is	ON
	VERIFY VERIFY	At encl 4880 BLIP Door Redun. N/Closed light is GR light at BLIP gate is	OFF ON
	VERIFI	GR light at BLIF gate is	ON
	CLOSE	BLIP gate	
	VERIFY	BLIP gate is	CLOSED
	PLACE	Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and	
		P/B	
	VERIFY	Linac is in	CA
	VEDIEV	At DI ID gots how Dogot light is	OFF
	VERIFY VERIFY	At BLIP gate-box Reset light is	OFF OFF
	VERIFY	At encl 4880 relays IK9 □ and EK4 □ are At encl 4880 N/Locked light is	ON
	VEXII I	At Chel 4000 IV Locked light is	ON
	RESET	BLIP Gate with ME-17 key	
	VERIFY	At BLIP gate-box Reset light is	ON
	VERIFY	At encl 4880 relays IK9 \square and EK4 \square are	ON
	VERIFY	At encl 4880 N/Locked light is	OFF
	VERIFY	Attempt to open gate with MCR S/R and local P/B	SUCCESSFUL
	VERIFY	At BLIP gate-box Reset light is	OFF
	VERIFY	At encl 4880 relays IK9 \square and EK4 \square are	OFF
	VERIFY	At encl 4880 N/Locked light is	ON
	CLOSE	BLIP gate	
	Check for	acceptance of Test of BLIP gate	
1.5 Test	of Plug Door	(DD)Cata	
1.5 1681	of Tiug Door	(ID)Gate	
	VERIFY	Hardware □, Electrical □ at PD gate is	O.K.
	PLACE	Linac in Restricted Access (RA) at encl 4880 with BNL-3 key and	
		green P/B	
	VERIFY	Linac is in	RA
	VEDIEV	Attempt to onen DD cote with DNI 2 key	CHCCECCEH
	VERIFY	Attempt to open PD gate with BNL-3 key	SUCCESSFUL
	OPEN	Outside Crash Glass box switch	
	VERIFY	At encl 4880 relay EK1 is	OFF
	VERIFY	PD Gate Crash light at encl 4880 is	ON
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	VERIFY CLOSE	Crash light at PD gate Outside Crash Glass switch and leave closed	OFF
	VERIFY	At encl 4880 relay EK1 is	ON
	VERIFY	PD Gate Crash light at encl 4880 is	OFF
	VERIFY	Crash light at PD gate is	ON
	OPEN	Inside Crash Glass box switch	
	VERIFY	At encl 4880 relay EK1 is	OFF
	VERIFY	PD Gate Crash light at encl 4880 is	ON
	VERIFY	Crash light at PD gate	OFF
	CLOSE	Inside Crash Glass switch and leave closed	0.34
	VERIFY	At encl 4880 relay EK1 is	ON
	VERIFY	PD Gate Crash light at encl 4880 is	OFF
	VERIFY	Crash light at PD gate is	ON
	CLOSE	Both PD Gate MS	
	VERIFY	At PD gate Door Switch light is	ON
Ш	RELEASE	Left PD gate MS	OIV
	VERIFY	At PD gate Door Switch light is	OFF
ш	CLOSE	Both PD Gate MS	OII
	VERIFY	At PD gate Door Switch light is	ON
	RELEASE	Right PD gate MS	011
	VERIFY	At PD gate Door Switch light is	OFF
	OPEN	Gate redundant (GR) MS near Swing gate	
	VERIFY	At encl 4880 relay EK2 is	OFF
	VERIFY	At encl 4880 PD Door Redun. N/Closed light is	ON
	VERIFY	GR light at PD gate is	OFF
	CLOSE	GR MS	
	VERIFY	At encl 4880 relay EK2 is	ON
	VERIFY	At encl 4880 PD Door Redun. N/Closed light is	OFF
	VERIFY	GR light at PD gate is	ON
	CLOSE	PD gate	
	VERIFY	Alarm sounds while PD is	CLOSING
	VERIFY	PD is	CLOSED
ш	VERII I	10 10	CLOSED
	PLACE	Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and	
		P/B	
	VERIFY	Linac is in	CA
	VERIFY	At DD gots boy N/Dogot light is	ON
		At PD gate-box N/Reset light is At PD gate-box Reset light is	
	VERIFY VERIFY	· ·	OFF
		At encl 4880 relay DK12 is	OFF
	VERIFY	At encl 4880 N/Reset light is	ON
	RESET	PD Gate with ME-17 key	
	VERIFY	At PD gate-box N/Reset light is	OFF
	VERIFY	At PD gate-box Reset light is	ON
	VERIFY	At encl 4880 relay DK12 is	ON
	VERIFY	At encl 4880 N/Reset light is	OFF
J	· ———— -		~
	VERIFY	Attempt to open gate with MCR S/R to start the process	SUCCESSFUL
	VERIFY	Alarm sounds while PD is	OPENING
	VERIFY	At PD gate-box Reset light is	OFF
Δ DI	A A TOTO 4 10	0.701 (37)	D '' 00

TRIP PD Emergency stop bar PD stops OPENING RESUME PD opening VERIFY PD continues to LEAVE PD open Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of Test of Plug Door gate is Check for acceptance of T			VERIFY	At encl 4880 relay DK12 is	OFF
VERIFY PD opening VERIFY PD opening VERIFY PD opening VERIFY PD opening PD open PD open PD open Check for acceptance of Test of Plug Door gate VERIFY Hardware			VERIFY	At encl 4880 N/Reset light is	ON
VERIFY PD opening VERIFY PD opening VERIFY PD opening VERIFY PD opening PD open PD open PD open Check for acceptance of Test of Plug Door gate VERIFY Hardware			TRIP	PD Emergency stop bar	
VERIFY PD continues to PD open Check for acceptance of Test of Plug Door gate					OPENING
VERIFY PD continues to PD open Check for acceptance of Test of Plug Door gate			PESIIME	PD opening	
LEAVE PD open Check for acceptance of Test of Plug Door gate VERIFY					OPEN
Check for acceptance of Test of Plug Door gate Check for acceptance of Test of Plug Door gate VERIFY		ш			OILIV
VERIFY				-	
□ VERIFY Hardware □, Electrical □ at PDS gate is PLACE Linac in Restricted Access (RA) at encl 4880 with BNL-3 key and green P/B □ VERIFY Linac is in RA □ VERIFY Attempt to open PDS gate with AA256 key SUCCESSFUL OPEN Crash Glass switch □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is OFF OPEN PDS gate switch □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is ON			Check fo	or acceptance of Test of Plug Door gate	
PLACE Linac in Restricted Access (RA) at encl 4880 with BNL-3 key and green P/B VERIFY Linac is in RA VERIFY Attempt to open PDS gate with AA256 key SUCCESSFUL OPEN Crash Glass switch VERIFY At encl 4880 relay EK3 is OFF VERIFY At encl 4880 N/Locked light is ON CLOSE Crash Glass switch VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate switch VERIFY At encl 4880 relay EK3 is OFF VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate switch VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate switch VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 relay EK3 is OFF OPEN PDS gate VERIFY At encl 4880 relay EK3 is OFF CLOSE PDS gate VERIFY At encl 4880 relay EK3 is OFF VERIFY At encl 4880 relay EK3 is OFF VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate with ALZEO CLOSE PDS gate with ALZEO CLOSE PDS	1.6	Te	est of Plug I	Door Swing (PDS) gate	
PLACE Linac in Restricted Access (RA) at encl 4880 with BNL-3 key and green P/B VERIFY Linac is in RA VERIFY Attempt to open PDS gate with AA256 key SUCCESSFUL OPEN Crash Glass switch VERIFY At encl 4880 relay EK3 is OFF VERIFY At encl 4880 N/Locked light is ON CLOSE Crash Glass switch VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 relay EK3 is OFF OPEN PDS gate switch VERIFY At encl 4880 N/Locked light is OFF VERIFY At encl 4880 relay EK3 is OFF VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate switch VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 relay EK3 is OFF OPEN PDS gate VERIFY At encl 4880 relay EK3 is OFF OPEN PDS gate VERIFY At encl 4880 relay EK3 is OFF VERIFY At encl 4880 relay EK3 is OFF VERIFY At encl 4880 relay EK3 is OFF VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate VERIFY At encl 4880 relay EK3 is ON CLOSE DS gate CLOSE DS gate		П	VERIFY	Hardware □. Electrical □ at PDS gate is	O.K.
□ VERIFY Linac is in RA □ VERIFY Attempt to open PDS gate with AA256 key SUCCESSFUL OPEN Crash Glass switch □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON CLOSE Crash Glass switch □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is OFF OPEN PDS gate switch □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate switch □ VERIFY At encl 4880 N/Locked light is ON CLOSE PDS gate switch □ VERIFY At encl 4880 N/Locked light is ON □ VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is OFF OPEN PDS gate □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate □ VERIFY At encl 4880 relay EK3 is ON CLOSE PDS gate □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY		_		•	
□ VERIFY			PLACE	· · · · · · · · · · · · · · · · · · ·	
□ VERIFY Attempt to open PDS gate with AA256 key OPEN Crash Glass switch □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON CLOSE Crash Glass switch □ VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate switch □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF □ VERIFY At encl 4880 N/Locked light is OFF □ VERIFY At encl 4880 N/Locked light is OFF □ VERIFY At encl 4880 N/Locked light is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 re		_	X/EDIEX/	•	D.A
OPEN		Ш	VERIFY	Linac is in	KA
□ VERIFY At encl 4880 relay EK3 is ON □ CLOSE Crash Glass switch ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is OFF OPEN PDS gate switch OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON □ CLOSE PDS gate switch ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is OFF ○ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is ON □ CLOSE PDS gate ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B OR □ VERIFY Linac is in CA □ VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R SUCCESSFUL			VERIFY	Attempt to open PDS gate with AA256 key	SUCCESSFUL
□ VERIFY CLOSE Crash Glass switch □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate switch □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON CLOSE PDS gate switch □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is OFF ○ OPEN PDS gate □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is ON □ CLOSE PDS gate □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B □ VERIFY Linac is in CA □ VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R SUCCESSFUL			OPEN	Crash Glass switch	
□ VERIFY CLOSE Crash Glass switch □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate switch □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON CLOSE PDS gate switch □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is OFF ○ OPEN PDS gate □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 relay EK3 is ON □ CLOSE PDS gate □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B □ VERIFY Linac is in CA □ VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R SUCCESSFUL				At encl 4880 relay EK3 is	OFF
CLOSE			VERIFY		ON
□ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF ○ OPEN PDS gate switch OFF □ VERIFY At encl 4880 relay EK3 is ON □ CLOSE PDS gate switch ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is OFF OPEN PDS gate □ VERIFY At encl 4880 relay EK3 is OFF ○ VERIFY At encl 4880 N/Locked light is ON □ CLOSE PDS gate ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B OFF □ VERIFY Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B CA □ VERIFY Linac is in CA □ VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R SUCCESSFUL				<u> </u>	
□ VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate switch OFF □ VERIFY At encl 4880 relay EK3 is ON □ CLOSE PDS gate switch ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON CLOSE PDS gate ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B OFF □ VERIFY Linac is in CA □ VERIFY Linac is in CA □ VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R SUCCESSFUL					ON
□ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON □ CLOSE PDS gate switch ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON □ CLOSE PDS gate ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B UERIFY Linac is in CA SUCCESSFUL			VERIFY		OFF
□ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON □ CLOSE PDS gate switch ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate OFF □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON □ CLOSE PDS gate ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B UERIFY Linac is in CA SUCCESSFUL			OPEN	PDS gate switch	
□ VERIFY CLOSE PDS gate switch □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate □ VERIFY At encl 4880 relay EK3 is □ VERIFY At encl 4880 N/Locked light is CLOSE PDS gate □ VERIFY At encl 4880 relay EK3 is □ VERIFY At encl 4880 relay EK3 is □ VERIFY At encl 4880 N/Locked light is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B □ VERIFY Linac is in CA SUCCESSFUL		П			OFF
CLOSE PDS gate switch VERIFY At encl 4880 relay EK3 is ON DERN PDS gate VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate VERIFY At encl 4880 relay EK3 is OFF VERIFY At encl 4880 N/Locked light is ON CLOSE PDS gate VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 relay EK3 is ON VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B VERIFY Linac is in CA SUCCESSFUL					
□ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF OPEN PDS gate □ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON CLOSE PDS gate □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B □ VERIFY Linac is in CA CA SUCCESSFUL					011
□ VERIFY At encl 4880 N/Locked light is OPEN PDS gate □ VERIFY At encl 4880 relay EK3 is □ VERIFY At encl 4880 N/Locked light is CLOSE PDS gate □ VERIFY At encl 4880 relay EK3 is □ VERIFY At encl 4880 relay EK3 is □ VERIFY At encl 4880 N/Locked light is OPF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B □ VERIFY Linac is in CA SUCCESSFUL		П			ON
□ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON CLOSE PDS gate □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B □ VERIFY Linac is in CA SUCCESSFUL		_			
□ VERIFY At encl 4880 relay EK3 is OFF □ VERIFY At encl 4880 N/Locked light is ON CLOSE PDS gate □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B □ VERIFY Linac is in CA SUCCESSFUL			ODEN	DDG	
UERIFY At encl 4880 N/Locked light is CLOSE PDS gate UVERIFY At encl 4880 relay EK3 is UVERIFY At encl 4880 N/Locked light is PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B UVERIFY Linac is in UVERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R CA SUCCESSFUL		_			OFF
CLOSE PDS gate □ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B □ VERIFY Linac is in CA □ VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R SUCCESSFUL		_		•	
□ VERIFY At encl 4880 relay EK3 is ON □ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B □ VERIFY Linac is in CA VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R SUCCESSFUL		Ш			ON
□ VERIFY At encl 4880 N/Locked light is OFF PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B □ VERIFY Linac is in CA □ VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R SUCCESSFUL		_			ON
PLACE Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B □ VERIFY Linac is in CA □ VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R SUCCESSFUL		_		•	
P/B Linac is in VERIFY Linac is in VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R CA SUCCESSFUL		Ц	V ERIF Y	At enci 4000 IV/Luckeu fight is	Off
□ VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R SUCCESSFUL			PLACE	· · · · · · · · · · · · · · · · · · ·	
□ VERIFY Attempt to open PDS gate with AA256 key with NO MCR S/R SUCCESSFUL			VERIFY		CA
				Attempt to open PDS gate with AA256 key with NO MCR S/R	SUCCESSFUL
		П	O1 1 4	A CHI A C DI D. C. L. (DDC)	

1.7 Test of Tank 1 (TK1) gate

VERIFY PLACE	Hardware □, Electrical □ at TK1 gate is Linac in Restricted Access (RA) at encl 4880 with BNL-3 key and	O.K.
VERIFY	green P/B Linac is in	RA
VERIFY	Attempt to open TK1 gate with AA256 key and P/B for Slide-bolt	SUCCESSFUL
OPEN VERIFY VERIFY CLOSE VERIFY VERIFY VERIFY	Crash Glass switch At encl 4880 relay DK4 is TK1 Prime Crash light at encl 4880 is Crash light at TK1 gate Crash Glass switch and leave closed At encl 4880 relay DK4 is TK1 Prime Crash light at encl 4880 is Crash light at TK1 gate is	OFF ON OFF ON OFF ON
HOLD VERIFY OPEN VERIFY CLOSE VERIFY OPEN VERIFY	Gate MS and Electric Strike (ES) Gate lamp □ and ES lamp □ are Gate MS Gate lamp □ and ES lamp □ are Gate MS and hold Gate lamp □ and ES lamp □ are ES Gate lamp is	CLOSED ON OFF CLOSED ON ON OFF
OPEN VERIFY VERIFY CLOSE VERIFY VERIFY VERIFY	Gate redundant (GR) MS At encl 4880 relay DK5 is At encl 4880 TK1 Door Redun. N/Closed light is GR light at TK1 gate is GR MS At encl 4880 relay DK5 is At encl 4880 TK1 Door Redun. N/Closed light is GR light at TK1 gate is	OFF ON OFF ON OFF ON
CLOSE VERIFY PLACE VERIFY	TK1 gate TK1 gate is Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and P/B Linac is in	CLOSED CA
VERIFY VERIFY VERIFY VERIFY	At TK1 gate-box Reset light is At encl 4880 relay DK3 □ and IK10 □ are At encl 4880 □ N/Reset light and at gate-box □ N/Reset is At TK1 gate-box RF Reset light is At encl 4880 relay DK6 is	OFF OFF OFF
RESET	TK1 Gate with BNL-3 key	
VERIFY VERIFY VERIFY VERIFY	At TK1 gate-box Reset light is At encl 4880 relay DK3 □ and IK10 □ are At encl 4880 □ N/Reset light and at gate-box □ N/Reset is At TK1 gate-box RF Reset light is At encl 4880 relay DK6 is	ON ON OFF ON ON

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	VERIFY	DK2, Linac Safely OFF, is	ON
	VERIFY CLOSE	Attempt to open gate with MCR S/R, BNL-3 key for Slide-bolt and ME-17 key	SUCCESSFUL
	CLUSE	TK1 gate	
	VERIFY	At TK1 gate-box Reset light is	ON
	VERIFY	At encl 4880 relay DK3 \square and IK10 \square are	ON
	VERIFY	At encl 4880 \square N/Reset light and at gate-box \square N/Reset is	OFF
	VERIFY	At TK1 gate-box RF Reset light is	OFF
	VERIFY	At encl 4880 relay DK6 is	OFF
	PLACE	Linac in RA at encl 4880 with BNL-3 key and P/B	
	VERIFY	Linac is in	RA
	PLACE	Linac in RF Controlled Access (RFCA) at encl 4880 with ME-16 key turned right	
	VERIFY	Linac is in	RFCA
	RESET	TK1 Gate with ME-16 key for RF	
	VERIFY	At TK1 gate-box RF Reset light is	ON
	VERIFY	At encl 4880 relay DK6 is	ON
	VERIFY	Attempt to open gate with MCR S/R, BNL-3 key for Slide-bolt and ME-16 key	SUCCESSFUL
	VERIFY	At TV1 gate how DE Deset light in	OFF
	VERIFY VERIFY	At TK1 gate-box RF Reset light is At encl 4880 relay DK6 is	OFF
	CLOSE	TK1 gate	Off
	CLOSE	5 mic	
1.8 Test	of Tank 9 (T	r acceptance of Test of TK1 gate (K9) gate	
	VERIFY	Handrage D. Electrical D at TVO acts is	O.K.
	PLACE	Hardware □, Electrical □ at TK9 gate is Linac in Restricted Access (RA) at encl 4880 with BNL-3 key and	U.K.
	FLACE	green P/B	
	VERIFY	Linac is in	RA
	VERIFY	Attempt to open TK9 gate with P/B	SUCCESSFUL
	HOLD	Gate MS and Electric Strike (ES)	CLOSED
	VERIFY	Gate lamp □ and ES lamp □ are	ON
	OPEN	Gate MS	
	VERIFY	Gate lamp \square and ES lamp \square are	OFF
	CLOSE	Gate MS and hold	CLOSED
	VERIFY	Gate lamp \square and ES lamp \square are	ON
_	OPEN	ES	ON
	VERIFY	Gate lamp is	ON
	VERIFY	ES lamp is	OFF
	CLOSE	TK9 gate	
	VERIFY	TK9 gate is	CLOSED
	PLACE	Linac in Controlled Access (CA) at encl 4880 with BNL-3 key and	
		P/B	
			~ .
	VERIFY	Linac is in	CA

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		VERIFY	At TK9 gate-box Reset light is		OFF
		VERIFY	At encl 4880 relay DK7 \square and IK7 \square is		OFF
		VERIFY	At encl 4880 N/Locked light is		ON
		RESET	TK9 Gate with ME-17 key for beam		
		VERIFY	At TK9 gate-box Reset light is		ON
		VERIFY	At encl 4880 relay DK7 □ and IK7 □ are		ON
		VERIFY	At encl 4880 N/Locked light is		OFF
		VERIFY	Attempt to open gate with MCR S/R and ME-1	7 key	SUCCESSFUL
		CLOSE	TK9 gate		SUCCESSFUL
		RESET	TK9 Gate with ME-16 key for RF		
		VERIFY	At TK9 gate-box Reset light is		ON
		VERIFY	At encl 4880 relay IK3 is		ON
		VERIFY	At encl 4880 N/Locked light is		OFF
		T/EDIEV/	-	C.1	aria anagram
		VERIFY	Attempt to open gate with MCR S/R and ME-10	б кеу	SUCCESSFUL
		VERIFY	At TK9 gate-box Reset light is		OFF
		VERIFY	At encl 4880 relay IK3 is		OFF
		VERIFY	At encl 4880 N/Locked light is		ON
		CLOSE	TK9 gate		
1.9	Test	of MCR Simu	Itaneous Release		
		GIVE	Simultaneous Release from MCR		
		VERIFY	At encl 4880 relay BK8 is		ON
		Chook for	accontance of Test of MCD Simultaneous Pole	0.00	
☐ Check for acceptance of Test of MCR Simultaneous Release.					
END OF TEST PROCEDURE					
TTL: Sign for completion of initial testing:					
				Date://	
TTL: Sign for completion of final testing:					
111.	∿1811	. 101 compicuo			
				Date://	
					